



cross talk

NEWS BULLETIN OF TRW AMATEUR RADIO CLUB



Sponsored by Systems Employee Association



WAC
WAS
DXCC
FD'71
FD'73
FD'75

JULY 1976

TRW/ARC Saturday Morning Nets 10AM LT

Primary	7.280 MHz
Secondary	3.980 MHz
Novice	7.140 MHz
Simplex	147.510 MHz

Aspects of Amateur Radio, or Gee Whiz

Every now and again, its possible to get a new slant on things just by changing your perspective a bit. Your Editor was recently impressed with some astronomical data published in the ham radio journals relating to the sunspot cycle (now at its low point). Back in 1973, an article was published in which the authors used sunspot observation data all the way back to 1740 to support a somewhat exotic statistical analysis leading to the conclusion that the next one or two cycles would be both late and low in suspot content. At the time, it seemed to me that summoning up most of the modern astronomical era to back up DX propagation predictions was pretty sporty. Comes now an article in July QST with observations of sunspots and auroras going back before 1000 AD, indicating that human observations of the sun have been occurring for far too short a time for us 1976 folks to sonfidently predict anything about old Sol except that he will rise tomorrow in the AM. Humanity has only existed for a time tick in relation to the sun. As a DXer of modest achievements, I feel that that does put us in our place. Gonna whisper "CQ Twenty" next time out.

EDITORIAL NOTE

This issue of CROSSTALK is being typed and assembled in Washington, where your editor has been doing a bit of investigative reporting to see if the folks in Congress know any moves that he doesnt. (Only kidding, Bev)

THE JULY MEETING

Same place, same day, same time as usual Wednesday, 28 July. Due to vacations and busy people, the program this month is TBD. DOOR PRIZES: two calculators and an ARRL Membership. BE THERE

JULY MEETING

"RADIO CONTROLLED MODELS"

by

Frank G. Kelly, President,

TRW Radio Control Club

28 July 12 Noon R2-1055

NOTES AND NOTICES

HEARTY CONGRATULATIONS to Jocelyn Carson, who now sports the call sign WN6OAW. OM Dave, WB6BGO, promptly supplied the acronym Only A Woman, which is clearly sour grapes, since he will now have to share that new TS-520. CU on the Novice bands, Jocelyn.

VK5FF IS ALIVE AND WELL and operating from VK5WC at Woomera, South Australia. W6FQ and K6YQ, and assorted spectators have been having scheduled contacts with Al and Jan on 20 meters. Next one is on Sunday, 25 July at 9 PM localtime on 14245 KHz. Call editor for next sked.

THE CLUB STATION still has no rotator on the tower. Two tower workmen are needed at W6TRW some Saturday. The thrust bearing plate has yet to be made and installed. If you can help, drop Bill Dews a note at M1-2130.

FOUND ON FIELD DAY: Sunglasses and a tank top. Call Ollie Saunders, X53971

HIGH SPEED CODE PRACTICE

If you have a general coverage receiver, and need code practice at fairly high speeds, you may copy, but not distribute, these transmissions:

Station NMC (USCG) 16 wpm Pt. Reyes 0030, 0630, 1900, 2100 on 4346 khz 8682 12730 17151.2
 Station KFS (IT&T) 20 wpm San Fran 0420, 1620, 2200, 2300 on 6348, 8715, 12695, 17185, 22515 khz.
 Station KPH (RCA) 25 wpm San Fran 0500, 0818, 1700 2300 on 2045, 4274, 5488, 8618, 12808.5 khz.
 Station WCC (RCA) 25 wpm NYC at 8 pm pdst on 2136, 4331, 6376, 8586, 13033 khz.
 Station WSL (IT&T) 28-30 wpm NYC at 8 pm pdst on 4343, 6418, 8514, 12997 khz.
 (information supplied by W6NAZ)

Treasurer's Report for June 1976

Balance on hand June 1, 1976: \$663.35

Receipts

QSL Sales	\$ 33.00
Raffle 6/23	21.00
	<u>54.00</u>

Expenses

QSL Orders	\$ 20.25
Meeting Expenses	12.90
Door Prizes	37.23
Callbook Listing	6.00
Field Day	170.60
	<u>246.98</u>

Balance on hand June 30, 1976: \$470.37

Respectfully submitted,

David P. Carson, WB6BGO
 TRW/ARC Treasurer

FIELD DAY WRAPUP

Contacts scored:

Voice

VHF	Hale	233
10	Saunders	40
15	Thornley	140
20	Taylor	410
40	Carson	419
75	Thornley	56

CW (Morris Code)

15	Hume	94
20	Heydon	447
40	Hume	205
80	Harrison	103

Attendance: At least 60 folks, including the one that ripped off Jack Clarkes IC-22A about 0300 Saturday

Major Events: Contact with VK5WC, Al Lee

Contact with WA6RAY's dad in New Hampshire

The power failure that occurred when W6RLN plugged in the coffee pot just when WB6TCR was about to make an OSCAR contact.

The 70 foot and 40 foot antennas

The meals--against heavy odds

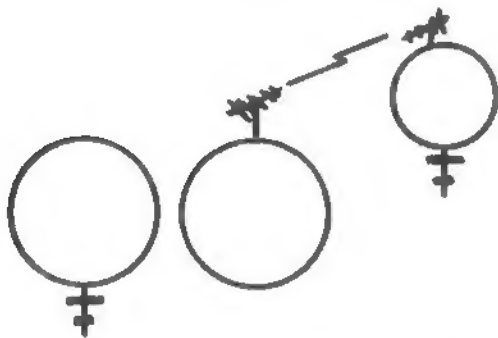
SEE YOU ON THE HILL AGAIN NEXT FIELD DAY

A NOTE AND NOTICE THAT HEARLY GOT AWAY

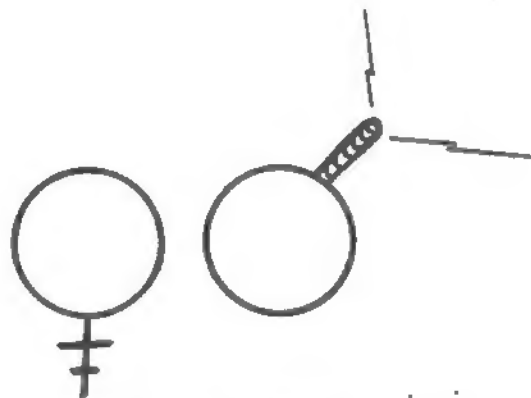
AFTER 25 YEARS, Frank Halligan, W6RLN, has fired up his new TS-520 on 40 Meter CW. Give Frank a call on 7100 KHz (Pse QRS)

THIS PAGE IS RATED SOMEWHERE BETWEEN "PG" AND "R"

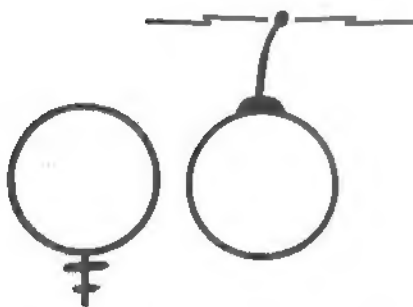
Investigation by your editor has disclosed that there are other publications than CROSSTALK and the Readers' Digest. One of these is the NITTANY NEWSLETTER, which originates in Western Pennsylvania. The N.N. folks have a bulletin exchange arrangement with us and with many other ham bulletins. One of these, in New England, supplied the following: Our younger readers, and particularly W6RXD, will kindly close their eyes and turn the page;



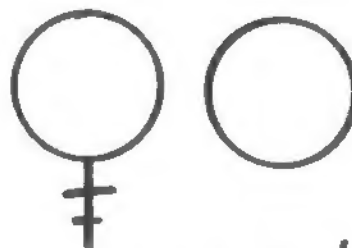
Bill, that is not an OSCAR!



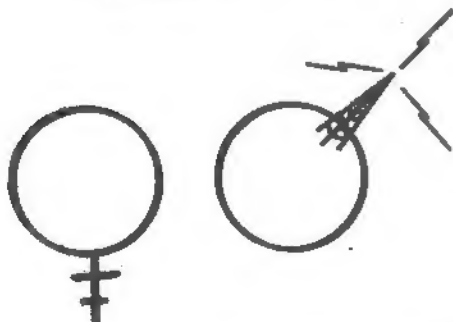
Sure, Doug, RUBBER DUCKIE is the right length.



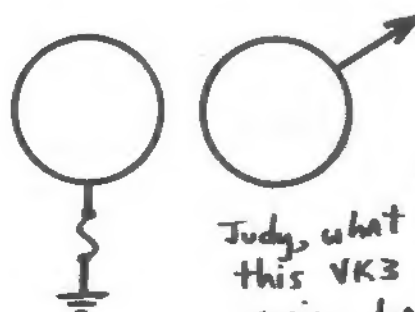
Yes, Fred, I DO LIKE the way you use your ANTENNA in the CAR.



Phil, I've heard of invisible Apartment-dwellers ANTENNAS but this is RIBICULOUS.



OK, Bob, YOU ARE A REPEATER.



Judy, what if you miss this VK3 in the NOVICE band...

OM — Say, honey, did you forget to lock the doors when you got out of the car on this side?
 I — Of course I locked the doors, I always do — why, the locks are up — that's strange.
 OM — a feeling of a dreaded happening beginning to flash across his mind
 Opening the door and gazing at the place where the mobile rig should be — but the feeling of dread came into reality. There in the place of that shiny chrome-plated happy hours, .3 mv for 60 db quieting front end, that source of pleasurable hamming was just NOTHING. A pair of long-nosed pliers and some cut wires gave mute testimony to a dastardly deed done by a fellow human being.
 Great despair was enveloping the OM as he hurriedly looked around to see if the culprit was only having a bit of funning as it were. But alas, wishful thinking and another look at the space where the channel switch, volume and squelch controls gave one an access to hom companionship. GONE — NO MORE.

OH NO!

To the Mail Security Office
 I would like to report my amateur radio mobile rig was just stolen from my car.
 Amateur radio rig? You mean a CB rig?
 No. Ham radio mobile equipment.
 Oh, there's been a lot of CB gear yanked out here lately. I'll call the station and they'll send someone up to check it out.
 Whadda ya use it for? It's not CB?
 Zounds! What a time and place to have to publicize amateur radio!
 It is used in Civil Defense.
 Oh, now I understand.
 So, the police arrive. Another CB rig ripped off.
 No, it is or was an amateur radio mobile installation.
 Huh? We've had guys on the roof even watching for them. It only takes 11 seconds to enter and seize the property.O.K., let's see your license. Phone number? That's it for now. Just have your insurance company check with the station. The case is on the books. Gee, that's tough.
 A very, very, very long ride home. No mobile rig.
 At the Insurance Company.
 A CB rig, you say?
 No. (Inwardly being disgusted at the seeming lack of uneducated public.) It was an amateur radio mobile rig, similar to, in a small way, to a CB rig. It was used in Civil Defense work.
 Oh, I understand now. Well, let's see the locale of the action. A trip to the car by the appraiser with clip board, camera, etc.
 Yep, it was mounted properly. How many miles on the car? What make? Year? How old was the radio equipment.
 That does it for now. You'll be hearing from us.
 We been getting a lot of these lately.
 A wait of a few weeks. Finally a check came, along with an explanation of how the figure was arrived at. Needless to say, the equipment did not hatch or increase in value. It was quite the other way around. In fact it was so much near zero that one is bound to have serious misgivings about the feasibility of mobile operation and the initial outlay of capital and the return on the supposedly many hours of enjoyment that a point seems to be reached as to what direction things should go. The car may not be so valuable as the rig. Or rigs should be so numerous and so very inexpensive that the profitability of "lifting" them would hardly be worth the bother. But the place of equipment is gone and the empty area under the dash gives mute testimony to the vagaries of the human race.
 So back to the drawing board, so to speak, sadder but wiser, no cigarettes, light lunches, etc. and maybe, just maybe some fine day another rig will take the place of a lost companion.

MAGIC FORMULA?

$$\begin{array}{l} \text{DEPRECIATION} \sqrt{\text{PROPERLY MOUNTED?} + \text{STOLEN OR DEDUCTIBLE} + \text{AGE OF RADIO} + \text{MILEAGE ON CAR} + \text{COVERAGE} = \text{HAM BURGLAR}} \end{array}$$



GUESS WHO

—WTFM

PROJECTION OF ANNUAL BUDGET JULY 1976

Beginning Balance (1/1/76): \$636.42

SOURCES OF FUNDS

SOURCE	AMOUNT												
	1st Quarter Jan Feb Mar			2nd Quarter Apr May Jun			3rd Quarter Jul Aug Sep			4th Quarter Oct Nov Dec			Annual
Dues	63.50			18.25			216.00			108.00			405.75
QSL Sales	93.75			49.50			50.00			100.00			293.25
ARRL Membership	186.00						24.00			24.00			234.00
SEA Allotment	51.50			292.25			123.00			127.00			593.75
May Dinner Mtg				212.50									212.50
CU Dividends	4.22			5.40			4.80			4.80			19.22
License Classes	541.50												541.50
Raffles	89.50			21.00			60.00			60.00			230.50
Advertising Sales				6.00			12.00			12.00			30.00
Hamfeast (November)										440.00			440.00
Swapmeet				78.26									78.26
Misc. Sales				30.00									30.00
Total	1029.97			713.16			489.80			875.80			3108.73

USES OF FUNDS

USE	AMOUNT				
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Annual
Postage	41.57	31.98	36.68	36.68	146.91
Magazines					
Subscription	33.50	6.00	9.00	—	48.50
Door Prizes	151.80	37.23	150.00	150.00	489.03
Mtg Expenses	40.79	55.67	36.00	36.00	168.46
ARRL Memberships*	178.00	8.00	24.00	24.00	234.00
License Classes	369.84	100.00	—	—	469.84
QSL Orders*	63.75	30.75	33.00	66.00	193.50
Printing	—	94.24	126.00	126.00	346.24
Station					
Maintenance	225.68	—	30.00	-0-	255.68
Field Day	—	170.60	—	—	170.60
Hamfeast					
(November)	—	—	—	510.00	510.00
Swapmeet	—	29.33	—	—	29.33
May Dinner Mtg	—	232.20	—	—	232.20
Miscellaneous	6.00	2.25	5.00	5.00	18.25
	—	—	—	—	—
Total	1110.93	798.25	449.68	953.68	3312.54

Projected Ending Balance (12/31/76): \$432.61

*Does not include door prizes.

1975 INTERNATIONAL AMATEUR RADIO UNION SUMMARY OF ANNUAL REPORTS

Country	Dist. (US\$)	Society Members	Licensed Members	Total Stations	Membership Necessary for License	Actual License Fee	Age Requirement	Ship Required?	Maximum Power output	Third Party Traffic	Emergency Corps	Date
Algeria	10.00	400	50	50	yes	11.00	16	yes	100	no	no	1975
Angola	13.25	653	275	275	yes	7.75	no	no	100	no	275	1972
Argentina	5.00	1,600	1,400	17,500	no	none	14	yes	1000	no	65	1971
Australia	14.00	4,513	3,420	6,841	no	10.00	16	no	150	no	1000	1975
Austria	4.00 ¹	1,700	1,353	1,804	no	7.20 - 28.80	16	no	100 ³	no	no	1974
Bahamas	21.00	25	22	84	no	6.30	no	yes	150	no	no	1972
Barbados	6.00	57	40	68	no	5.00	no	yes	500	no	no	1975
Belgium	8.50	1,380	890	1,400	no	9.00 - 50.00	16	no	500	no	130	1974
Bermuda	8.00	90	66	68	no	3.00	no	no	150	no	no	1975
Bolivia	18.00	887	887	887	yes	15.00	18	yes	2000 ⁵	yes	200	1975
Brazil	24.00	15,000	10,630	10,000	yes	4.50	14	yes	1000	yes	no	1975
Bulgaria	none	8,200	4,900	650	yes	.50	18	yes	1000	no	no	1972
Canada	10.00	4,687	3,757	14,474	no	13.00	no	no	1000	yes	yes	1975
Chile	10.00	1,819	1,340	2,300	no	4.00	15	no	1200	no	5	1973
Colombia	12.00	600	550	3,200	no	2.50	18	yes	1000	yes	100	1974
Costa Rica	15.00	212	212	450	yes	3.00	15	yes	2000 ⁵	yes	no	1975
Cyprus	3.00	70	52	52	no	15.00	16	no	150	no	8	1975
Czechoslovakia	1.50	10,862	2,191	3,052	yes	1.50	15	yes	300	no	no	1975
Denmark	11.00	4,880	3,216	4,560	no	6.00	14	no	500	no	no	1974
Dominican Republic	24.00	100	84	1,200	no	10.00	12	no	1000	yes	50	1975
Ecuador	39.00	652	652	652	yes	—	18	yes	1600	yes	—	1975
El Salvador	24.00	110	110	198	no	none	14	no	1000	yes	6	1973
Faroe Islands	4.00	126	60	80	no	7.00	14	no	500	no	no	1975
Finland	13.00	2,772	2,542	2,542	yes	.76	no	no	1000	no	yes	1975
France	11.50	10,633	4,924	8,600	no	15.50	18	yes	100	no	500	1975
Germany (Dem. Rep.)	—	6,594	1,567	1,567	yes	none	no	yes	2000	no	no	1973
Germany (Fed. Rep.)	26.00	28,050	19,415	23,287	no	14.40	16	no	150 ³	no	no	1975
Ghana	2.65	13	13	23	no	7.81	15	no	150	no	no	1972
Greece	12.00	500	200	200	yes	10.00	15	yes	300 ⁵	no	10	1975
Guatemala	2.00	112	112	167	no	none	18	no	1000	yes	yes	1974
Honduras	12.00	80	55	150	no	5.00	no	yes	1000	yes	no	1973
Hong Kong	8.00	67	39	55	no	10.00	16	yes	150	no	no	1975
Hungary	none	1,414	1,414	1,414	yes	1.00	16	yes	500	no	no	1974
Iceland	6.66	79	50	57	no	2.33	14	yes	500 ⁵	no	yes	1975
India	2.00	300	250	750	no	2.00	14	yes	150	no	no	1975
Ireland	10.00	253	183	402	no	5.00	16	no	150	no	no	1975
Israel	6.70	250	150	600	no	3.00	no	no	1000	yes	no	1975
Italy	9.00	10,400	6,095	8,500	no	9.00	no	no	300	no	200	1975
Ivory Coast	8.00	30	25	81	no	18.00	16	no	1000	no	no	1974
Jamaica	6.80	75	46	32	no	2.20	17	yes	1000	no	25	1973
Japan	6.00	68,664	62,279	278,331	no	.40	no	no	1200	no	no	1975
Kenya	5.70	40	40	40	no	8.50	no	no	150	no	20	1974
Korea	3.60	500	150	78	yes	none	no	yes	1000	no	yes	1975

¹ varies by province² inc input, unless otherwise noted³ plate disallowance⁴ in addition to emergency⁵ peak envelope power out

1975 INTERNATIONAL AMATEUR RADIO UNION SUMMARY OF ANNUAL REPORTS

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Lebanon	8.00	65	65	132	no	25.00	18	no	1000	no	no	1975
Liberia	5.00	25	25	58	no	10.00	18	no	2000 ⁵	yes	no	1975
Luxembourg	7.00	140	125	134	no	10.00	18	no	100	no	no	1975
Malaysia	4.50	56	56	101	no	4.00	21	yes	150	no	no	1975
Malta	4.00	32	21	70	no	8.00	14	yes	150	no	no	1975
Mauritius	3.50	39	21	30	no	4.60	15	yes	150	no	no	1975
Mexico	20.00	998	995	2,200	no	2.00	15	yes	1000	yes	200	1975
Monaco	2.00	22	19	20	no	1.00	16	no	100	no	no	1974
Morocco	4.00	206	206	206	yes	5.00	no	yes	100	no	no	1975
Mozambique	10.00	421	253	253	yes	10.00	no	yes	500	no	no	1975
Netherlands	15.00	4,850	1,925	3,210	no	15.00 - 20.00	18	no	150	no	62	1974
Netherlands Antilles	11.00	79	39	85	no	7.00	15	no	1000	no	no	1975
New Zealand	6.60	3,130	2,364	4,000	no	3.30	14	no	150	no	yes	1975
Nicaragua	17.14	250	250	370	no	3.57	no	no	150	no	no	1975
Nigeria	2.00	10	6	—	no	6.00	18	no	none	yes	—	1972
Norway	15.00	2,367	1,956	3,735	no	10.00	14	yes	150	no	no	1975
Pakistan	2.10	40	21	34	no	1.05	21	yes	600	no	no	1975
Panama	48.00	100	90	200	no	8.00 - 9.00	15	yes	1000 ⁵	yes	40	1975
Paraguay	10.00	300	300	450	no	10.00	12	yes	2000 ⁵	no	yes	1975
Peru	27.00	872	825	1,390	no	3.50	no	yes	1000	yes	250	1975
Philippines	6.95	580	411	411	no	1.38	15	yes	2000 ⁵	yes	38	1975
Poland	6.00	6,460	4,900	5,125	yes	none	15	yes	750	no	—	1975
Portugal	11.00	782	501	461	yes	7.00	16	yes	400 ³	no	—	1972
Rhodesia	2.78	207	137	198	no	5.56	10	no	150	no	60	1969
Romania	2.00 - 5.00	3,600	1,424	1,600	yes	2.00 - 4.00	10	no	400	no	—	1975
Singapore	5.00	40	30	40	no	10.00	16	no	150	no	1,550	1975
South Africa	15.00	1,860	1,380	3,230	no	9.00	16	no	150	no	no	1975
Spain	9.00	7,600	2,256	2,256	yes	2.00 - 25.00	18	yes	—	no	15	1974
Sri Lanka	4.00	115	36	58	no	4.00	18	no	150	no	15	1975
Surinam	7.00	50	50	54	no	3.00 - 6.00	18	no	500	no	no	1974
Sweden	12.00	4,273	3,536	5,341	no	8.00	14	yes	500	no	no	1975
Switzerland	14.00	2,105	1,174	1,398	no	24.00 - 28.80	15	yes	150 ³	no	no	1975
Syria	7.00	35	9	11	yes	6.25	15	yes	500	no	no	1974
Thailand	15.00	49	40	75	yes	15.00	18	no	1000	no	no	1975
Trinidad & Tobago	4.00	64	47	82	no	4.80	18	yes	1000	yes	no	1974
USSR	2.70	114,000	5,008	15,085	no	none	16	yes	200	no	no	1969
United Kingdom	13.20	18,000	10,000	20,250	no	7.20	14	yes	150	no	no	1975
United States	9.00	108,191	86,374	256,264	no	.80	no	yes	1000	yes	26,200	1975
Uruguay	12.50	550	550	2,100	no	none	18	no	1200 ⁵	yes	128	1975
Venezuela	27.75	1,568	1,490	7,000	no	none	18	yes	1000	yes	470	1974
Western Samoa	14.00	7	6	7	no	5.00	15	no	1000	no	no	1975
Yugoslavia	1.12	50,059	2,275	1,908	yes	3.00	15	yes	2000 ⁵	no	yes	1975
Zaire	5.00	50	—	—	yes	2.40	—	—	100	no	yes	1973
Zambia	3.00	IE	26	35	no	6.00	18	no	150	no	no	1975

²d.c. input, unless otherwise noted
³plate dissipation
⁴in addition to emergencies
⁵peak envelope power output

EXECUTIVE COMMITTEE REPORT

By ED THORNLEY, W6RXD

The TRW/ARC Executive Committee met on 14 July 1976 at 1900 PDT at the home of Veep Halligan. Prior to the meeting, Barbara Halligan served a Pizza Dinner complete with wine and all the trimmings. Nice way to start a meeting. Also, the assembled officers were able to cast envious eyes over the new low band gear recently installed at W6RLN.

Present at the meeting were: Halligan, Carson, Dews, Thornley and Clarke. Halligan presided in the absence of Pres Cartier.

Business

1. Dews requested that work phone numbers be added to the list of officers names in the Cross-Talk to aid those people seeking membership or other information.
2. Clarke reviewed the 1976 Field Operations. He reported that we had many new-comers participating even though advance publicity was not too heavy. Overall operations were quite good and the site was considered excellent by all. Approximate cost to the club was \$ 170, with more than adequate food than was really needed. Band activity dropped off late Sunday morning so the switch was pulled at 1115. In spite of the non-competitive theme this year, the raw total QSO count was quite high - in excess of 2200.
3. The supply of QSL cards has dropped to zero. Much discussion was held regarding re-ordering the Pioneer card, or developing a new card design based on a more current TRW spacecraft. Thornley will investigate and report at the next meeting.
4. Carson presented a summary of the club's financial picture for the 1976 year. (If all goes well, see copy elsewhere in this issue) Considerable discussion regarding how to reduce costs, particularly printing of Cross-Talk and other items, which represent a major piece of our annual expenditures. Some consideration of raising membership dues was made. Dues have been at current level for umpteen years in spite of inflation everywhere else. This matter would have to be brought before the membership and voted upon, in accordance with the club constitution and by-laws.
5. TRW/ARC 2-meter repeater was discussed. Dews was designated by committee vote to chair a sub-committee of five club members as a minimum, to formulate a repeater plan for the club and to report the plan to the Executive Committee by 15 September 1976. Any member interested in participating in the activities are asked to contact Dews.
6. A motion was made by Dews, seconded by Halligan, that the club purchase necessary crystals to permit reverse split operation of the club IC-230. Approximate cost of \$ 30 for crystals is anticipated and conversion of rig to be made by one of our highly skilled members. The motion was carried.
7. November being just around the corner, Halligan suggested that we start planning our annual "Ham-Feast". A sharp chairman is needed for this event and a volunteer call to Cartier or Halligan will be cheerfully accepted!

EXECUTIVE COMMITTEE REPORT (cont)

8. Clarke and Thornley reported on the support provided by South-Bay area RACES members to the Redondo Beach Police Department on the Fourth of July at the King Harbor area. On very short notice, RACES members put together a five-station network located at key points in and around the harbor area, provided two channels of radio to back-up the RBPd, and maintained the net from 2 PM until well after 11 PM. No unusual events were reported in spite of the large crowds that gathered for the festivities and fireworks, but RACES was there to serve "just in case". TRW/ARC RACES members on duty included Clarke, McKechnie, Linstruth and Thornley.

ANTENNA FARM FOR SALE

We have a report that a good deal is available to anyone who wishes to acquire a set of antennae and related paraphinellia. The deal includes a 40' Tri-ex tower, Ham-M rotor, Hornet 4-element tri-bander, a pair of 11-element 220MHz beams and a 5/8-wave two-meter vertical. Contact Ross Jester, 9944 Gaviota Avenue, Granada Hills, home phone 892-2257. We understand that \$ 140 takes the works.